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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/768,964	01/29/2004	Tomislav F. Milinusic	LAMA122341	4554
26389	7590	09/06/2005	EXAMINER	
CHRISTENSEN, O'CONNOR, JOHNSON, KINDNESS, PLLC 1420 FIFTH AVENUE SUITE 2800 SEATTLE, WA 98101-2347			RATCLIFFE, LUKE D	
			ART UNIT	PAPER NUMBER
			3662	

DATE MAILED: 09/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/768,964	Applicant(s) MILINUSIC, TOMISLAV F.	
	Examiner Luke D. Ratcliffe	Art Unit 3662	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 29 January 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

The disclosure is objected to because of the following informalities: Page 6 line 5 "notion" should be "motion".

Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4 and 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hoschette (4965453) in view of Falbel (5189295).

Referring to claim 1, Hoschette shows an elongated body (figure 1 Ref 16), and optical head mounted on the body (figure 1 Ref 20), a sensor (figure 7 Ref 32a – 32e) in communication with at least five optical element (figure 7 Ref 28a – 28e), and a processor adapted to receive signals from the sensor and to perform optical flow motion extraction in the form of yaw and pitch and calculated attitude (figure 7). Falbel shows a processor that is adapted to receive signals to perform optical flow motion extraction in the form of yaw, pitch, and roll (figure 4). It would have been obvious to modify Hoschette to include the roll determination taught in Falbel because this is necessary for a plane with occupants and would then be used but would be extraneous for a projectile.

Referring to claim 2, Hoschette as modified shows more than one optical element (figure 7 Ref 28a-28e).

Referring to claim 3, Hoschette shows the optical elements that are spatially arranged around the body to create a symmetric layout of optical paths (figure 2).

Referring to claim 4, Hoschette shows at least five optical elements focused in different directions and angled at a known angle relative to the body to create an optical view path to at least five viewing regions (figure 2 and corresponding specification)

Referring to claim 6, Hoschette shows a secondary optical element that creates a secondary optical path at a slight angle relative to the view region (figure 7 Ref 28f).

Referring to claim 7, Hoschette shows a viewing region that is an earth reference viewing region (figure 1).

Referring to claim 8, Falbel shows a viewing region that is a celestial reference viewing region and processor that determines position based on pixel shift (figure 4). It would have been obvious to modify Hoschettel to include the celestial reference position determination because if there was no ground based signal for the sensors to receive the system could still work using the celestial references.

Claims 5 and 9-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hoschette (4965453) in view of Falbel (5189295) as applied to claim 1 above, and in further view of Kasser (5191385).

Referring to claims 5, 9, and 12, Hoschette shows an elongated body (figure 1 Ref 16), and optical head mounted on the body (figure 1 Ref 20), a sensor (figure 7 Ref 32a – 32e) in communication with at least five optical element (figure 7 Ref 28a – 28e),

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and a processor adapted to receive signals from the sensor and to perform optical flow motion extraction in the form of yaw and pitch and calculated attitude (figure 7). Falbel shows a processor that is adapted to receive signals to perform optical flow motion extraction in the form of yaw, pitch, and roll (figure 4). Kasser shows an earth based optical element that is a nadir optical element (column 4 lines 63-69). It would have been obvious to modify Hoschette to include the roll determination taught in Falbel because this is necessary for a plane with occupants and would then be used but would be extraneous for a projectile. It would have been obvious to modify Hoschette to include the nadir optical element taught in Kasser because this creates an optical path that will view the nadir of a body, signal, or viewing region.

Referring to claim 13, Hoschette as modified shows more than one optical element (figure 7 Ref 28a-28e).

Referring to claim 10, Hoschette shows a secondary optical element that creates a secondary optical path at a slight angle relative to the view region (figure 7 Ref 28f).

Referring to claim 14, Hoschettel shows a viewing region that is an earth reference viewing region (figure 1).

Referring to claims 11 and 15, Falbel shows a viewing region that is a celestial reference viewing region and processor that determines position based on pixel shift (figure 4). It would have been obvious to modify Hoschettel to include the celestial reference position determination taught in Falbel because if there was no ground based signal for the sensors to receive the system could still work using the celestial references.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Luke D. Ratcliffe whose telephone number is 571-272-3110. The examiner can normally be reached on 8:00-4:30 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Tarcza can be reached on 571-272-6979. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LDR

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